



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
10/552,261	10/05/2005	Kyoung-Ju Shin	6192.0643.US	6528		
23345	7590	01/06/2009	EXAMINER			
MC GUIREWOODS, LLP 1750 TYSONS BLVD SUITE 1800 MCLEAN, VA 22102				TRAN, MY CHAU T		
ART UNIT		PAPER NUMBER				
2629						
MAIL DATE		DELIVERY MODE				
01/06/2009		PAPER				

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/552,261	SHIN ET AL.	
	Examiner	Art Unit	
	MY-CHAU T. TRAN	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 October 2008.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-42 is/are pending in the application.
 4a) Of the above claim(s) 17-41 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,2,8-16 and 42 is/are rejected.
 7) Claim(s) 3-7 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 05 October 2005 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Application and Claims Status

1. Applicant's amendment and response filed 10/23/2008 are acknowledged and entered.

2. Claims 1-41 were pending. Applicants have amended claims 1, 3, 5, 7-9, and 11-14; and added claim 42. No claims were cancelled. Therefore, claims 1-42 are currently pending. Claims 17-41 are drawn to non-elected species and/or inventions, wherein the election was made without traverse in the reply filed on 06/03/2008, and thus these claims remain withdrawn from further consideration by the examiner, 37 CFR 1.142(b), there being no allowable generic claim. Accordingly, claims 1-16 and 42 are under consideration in this Office Action.

Drawings

3. The drawings were received on 10/23/2008. These drawings are acceptable.

Status of Claim(s) Objection(s) and /or Rejection(s)

4. The objection of claim 5 under 37 CFR 1.75 as being a substantial duplicate of claim 3 has been withdrawn in light of applicant's arguments, see pgs. 12-13, filed 10/23/2008.

Maintained Rejection(s)

Claim Rejections - 35 USC § 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 2, and 9-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Inukai (US Patent Application Publication US 2001/0038367 A1).

For **claims 1, 2, and 9-16**, Inukai discloses an active matrix EL (electroluminescence) display device (see e.g. Abstract; sections: [0002], [0036], [0069] thru [0076]; figs. 1-3). As illustrated by figure 1, the display device comprises a pixel portion (ref. #101), a gate signal line driver circuit (ref. #103), a source signal line driver circuit (ref. #102), and an opposing power source line driver circuit (ref. #104) (see e.g. sections: [0069]-[0070]). The pixel portion (ref. #101) (refers to instant claimed display panel) comprises a plurality of source signal line (ref. #S1 to Sx) (refers to instant claimed data line) that provide the data signal, a plurality of gate signal line (ref. #G1 to Gy) (refers to instant claimed scan signal line) that provide the scan signal, a plurality of power source line (ref. #V1 to Vx) (refers to instant claimed current supply line/first current supply line and instant claims 9-12), a plurality of opposing power source line (ref. #E1 to Ey) (refers to instant claimed current supply line/second current supply line and instant claims 9-12), and a plurality of pixel (ref. #105) that is arranged in a matrix region wherein each region having one each of a source signal line, gate signal line, power source line, and opposing power source line (refers to instant claim 14) (see e.g. section: [0071]-[0086]; fig. 3). The power source line (ref. # (V)) and the opposing power source line (ref. # (E)) are connected via the transistor (ref. #108) (refers to instant claimed limitation of the first current supply line contacts the second current supply line) (see e.g. figs. 2 and 3). Each pixel comprises a switching TFT (ref. #107) (refers to instant claimed switching part) that is connected to the source signal line and the gate signal line; an EL driver TFT (ref. #108) (refers to instant claimed driving part) that is connected to the power source line, the switching TFT, and the EL element;

a capacitor (ref. #112); and an EL element, which includes an organic compound sandwiched between a pair of electrodes (anode and cathode) (refers to instant claimed organic electro luminescent part) wherein the anode is connected to the EL driver TFT and the cathode is connected to the opposing power source line (see e.g. section: [0006]-[0007] and [0071]-[0086]; figs. 2 and 3). The type of TFT for both the switching TFT and the EL driver TFT include either the n-channel TFT or the p-channel TFT (see e.g. section: [0081]) (refers to instant claims 15 and 16).

Therefore, the device of Inukai does anticipate the instant claimed invention.

Response to Arguments

7. Applicant's arguments directed to the above 102(b) rejection were considered but they are not persuasive for the following reasons. Please note that the above rejection has been modified from its original version to more clearly address applicant's newly amended and/or added claims and/or arguments.

[1] Applicant contends that "*Inukai does not disclose, teach or suggest wherein the first current supply line contacts the second current supply line, as claimed in amended independent amended claim 1 of the present invention*". Thus, the device of Inukai does not anticipate the instant claimed invention.

This is not found persuasive for the following reasons:

[1] The examiner respectfully disagrees. It is the examiner's position that the device of Inukai does anticipate the instant claimed invention. First as shown by figure 3, the power source line (ref. #(V)) and the opposing power source line (ref. #(E)) is connected via the transistor (ref. #108), and as a result the reference of Inukai the first current supply line contacts

the second current supply line. Second, the broadest reasonable interpretation of the term ‘*contacts*’ of the instant claim 1 would encompass both a direct connection and an indirect connection, i.e. the type of contact between the instant claimed first current supply line and the instant claimed second current supply line would encompass both a direct contact (direct connection) and an indirect contact (indirect connection). Here, Inukai discloses an indirect contact between the power source line (ref. # (V)) and the opposing power source line (ref. # (E)), i.e. the power source line (ref. # (V)) and the opposing power source line (ref. # (E)) is connected via the transistor (ref. #108).

Therefore, the teachings of Inukai do anticipate the device of the instant claims, and the rejection is maintained.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
9. Claims 1, 2, and 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inukai (US Patent Application Publication US 2001/0038367 A1).

For ***claims 1, 2, and 9-16***, Inukai discloses an active matrix EL (electroluminescence) display device (see e.g. Abstract; sections: [0002], [0036], [0069] thru [0076]; figs. 1-3). As illustrated by figure 1, the display device comprises a pixel portion (ref. #101), a gate signal line driver circuit (ref. #103), a source signal line driver circuit (ref. #102), and an opposing power source line driver circuit (ref. #104) (see e.g. sections: [0069]-[0070]). The pixel portion (ref. #101) (refers to instant claimed display panel) comprises a plurality of source signal line (ref.

#S1 to Sx) (refers to instant claimed data line) that provide the data signal, a plurality of gate signal line (ref. #G1 to Gy) (refers to instant claimed scan signal line) that provide the scan signal, a plurality of power source line (ref. #V1 to Vx) (refers to instant claimed current supply line/first current supply line and instant claims 9-12), a plurality of opposing power source line (ref. #E1 to Ey) (refers to instant claimed current supply line/second current supply line and instant claims 9-12), and a plurality of pixel (ref. #105) that is arranged in a matrix region wherein each region having one each of a source signal line, gate signal line, power source line, and opposing power source line (refers to instant claim 14) (see e.g. section: [0071]-[0086]; fig. 3). The power source line (ref. # (V)) and the opposing power source line (ref. # (E)) are connected via the transistor (ref. #108) (refers to instant claimed limitation of the first current supply line contacts the second current supply line) (see e.g. figs. 2 and 3). Each pixel comprises a switching TFT (ref. #107) (refers to instant claimed switching part) that is connected to the source signal line and the gate signal line; an EL driver TFT (ref. #108) (refers to instant claimed driving part) that is connected to the power source line, the switching TFT, and the EL element; a capacitor (ref. #112); and an EL element, which includes an organic compound sandwiched between a pair of electrodes (anode and cathode) (refers to instant claimed organic electro luminescent part) wherein the anode is connected to the EL driver TFT and the cathode is connected to the opposing power source line (see e.g. section: [0006]-[0007] and [0071]-[0086]; figs. 2 and 3). The type of TFT for both the switching TFT and the EL driver TFT include either the n-channel TFT or the p-channel TFT (see e.g. section: [0081]) (refers to instant claims 15 and 16).

The teachings of Inukai differ from the presently claimed invention as follows:

For **claim 8**, Inukai fails to disclose that the ‘*storage capacitor disposed between the first current supply line and the driving part*’. However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to disclose that the ‘*storage capacitor disposed between the first current supply line and the driving part*’, since Inukai disclose that it is art recognized wherein the capacitor can be placed between the current supply line and the driving TFT (see fig. 23). Moreover, in both the prior art pixel structure (see fig. 23) and the pixel structure of Inukai (see fig. 3) the capacitor is connected to the current supply line (ref. #V), and as a result the placement of the capacitor, i.e. between the current supply line and the driving TFT, would be a choice of experimental design and is considered within the purview of the cited prior art.

Therefore, the teachings of Inukai do render the device of the instant claims *prima facie* obvious.

Response to Arguments

10. Applicant’s arguments directed to the above 103(a) rejection were considered but they are not persuasive for the following reasons. Please note that the above rejection has been modified from its original version to more clearly address applicant’s newly amended and/or added claims and/or arguments.

[1] Applicant alleges that “*Inukai does not disclose, teach or suggest wherein the first current supply line contacts the second current supply line, as claimed in amended independent amended claim 1 of the present invention*”. Thus, the teachings of Inukai do not render the device of the instant claims *prima facie* obvious.

This is not found persuasive for the following reasons:

[1] The examiner respectfully disagrees. It is the examiner's position that the teachings of Inukai do render the device of the instant claims *prima facie* obvious. First as shown by figure 3, the power source line (ref. #(V)) and the opposing power source line (ref. #(E)) is connected via the transistor (ref. #108), and as a result the reference of Inukai the first current supply line contacts the second current supply line. Second, the broadest reasonable interpretation of the term '*contacts*' of the instant claim 1 would encompass both a direct connection and an indirect connection, i.e. the type of contact between the instant claimed first current supply line and the instant claimed second current supply line would encompass both a direct contact (direct connection) and an indirect contact (indirect connection). Here, Inukai discloses an indirect contact between the power source line (ref. # (V)) and the opposing power source line (ref. # (E)), i.e. the power source line (ref. # (V)) and the opposing power source line (ref. # (E)) is connected via the transistor (ref. #108).

Therefore, the teachings of Inukai do render the device of the instant claims *prima facie* obvious, and the rejection is maintained.

New Rejection(s) – Necessitated by Amendment

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claim 42 is rejected under 35 U.S.C. 102(b) as being anticipated by Inukai (US Patent Application Publication US 2001/0038367 A1).

For *claim 42*, Inukai discloses an active matrix EL (electroluminescence) display device (see e.g. Abstract; sections: [0002], [0036], [0069] thru [0076]; figs. 1-3). As illustrated by figure 1, the display device comprises a pixel portion (ref. #101), a gate signal line driver circuit (ref. #103), a source signal line driver circuit (ref. #102), and an opposing power source line driver circuit (ref. #104) (see e.g. sections: [0069]-[0070]). The pixel portion (ref. #101) (refers to instant claimed display panel) comprises a plurality of source signal line (ref. #S1 to Sx) (refers to instant claimed data line) that provide the data signal, a plurality of gate signal line (ref. #G1 to Gy) (refers to instant claimed scan signal line) that provide the scan signal, a plurality of power source line (ref. #V1 to Vx) (refers to instant claimed current supply line/first current supply line and instant claims 9-12), a plurality of opposing power source line (ref. #E1 to Ey) (refers to instant claimed current supply line/second current supply line and instant claims 9-12), and a plurality of pixel (ref. #105) that is arranged in a matrix region wherein each region having one each of a source signal line, gate signal line, power source line, and opposing power source line (refers to instant claim 14) (see e.g. section: [0071]-[0086]; fig. 3). The power source line (ref. # (V)) and the opposing power source line (ref. # (E)) are connected via the transistor (ref. #108) (see e.g. figs. 2 and 3). Moreover, Inukai discloses that the electric potential of the opposing power source line can be kept at the same level as the electric potential of the power source line (refers to instant claimed limitation of the first voltage is substantially the same as the second voltage) (see e.g. sections: [0094]; [0136]; and [0171]). Each pixel comprises a switching TFT (ref. #107) (refers to instant claimed switching part) that is connected to the

source signal line and the gate signal line; an EL driver TFT (ref. #108) (refers to instant claimed driving part) that is connected to the power source line, the switching TFT, and the EL element; a capacitor (ref. #112); and an EL element, which includes an organic compound sandwiched between a pair of electrodes (anode and cathode) (refers to instant claimed organic electro luminescent part) wherein the anode is connected to the EL driver TFT and the cathode is connected to the opposing power source line (see e.g. section: [0006]-[0007] and [0071]-[0086]; figs. 2 and 3). The type of TFT for both the switching TFT and the EL driver TFT include either the n-channel TFT or the p-channel TFT (see e.g. section: [0081]) (refers to instant claims 15 and 16).

Therefore, the device of Inukai does anticipate the instant claimed invention.

Response to Arguments

13. Applicant's arguments directed to the above 102(b) rejection were considered but they are not persuasive for the following reasons.

[1] Applicant argues that Inukai discloses that the electric potential of the opposing power source lines "refers to an electric potential different from the power supply electric potential to a degree that causes the EL element to emit light when the power supply electric potential is given to the pixel electrode. Paragraph [0084])". Thus, the device of Inukai does not anticipate the instant claimed invention of new claim 42.

This is not found persuasive for the following reasons:

[1] The examiner respectfully disagrees. It is the examiner's position that the device of Inukai does anticipate the instant claimed invention. First, the examiner respectfully disagrees with applicant contention that the section [0084] disclosure of Inukai, i.e. '*The ON opposing*

electric potential refers to an electric potential different from the power supply electric potential to a degree that causes the EL element to emit light when the power supply electric potential is given to the pixel electrode', teaches away from the claimed limitation of "wherein the first voltage is substantially the same as the second voltage" of instant new claim 42. The claimed limitation of "wherein the first voltage is substantially the same as the second voltage" of instant new claim 42 can be interpreted to encompass to include a difference in the voltage of the first and second voltages for the term 'substantially the same' is a broad term such that the degree of sameness would include a degree of difference. Here, the disclosure of Inukai, i.e. 'The ON opposing electric potential refers to an electric potential different from the power supply electric potential to a degree that causes the EL element to emit light when the power supply electric potential is given to the pixel electrode', imply that there is a degree of difference between the electric potential of the opposing source line and the electric potential of the power source line, and as a result would read on the claimed limitation of "wherein the first voltage is substantially the same as the second voltage" of instant new claim 42. Second, Inukai also discloses that the electric potential of the opposing source line and the electric potential of the power source line can be kept the same as discussed in the above rejection of paragraph 12.

Therefore, the teachings of Inukai do anticipate the device of the instant claims.

Allowable Subject Matter

14. Claims 3-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MY-CHAU T. TRAN whose telephone number is (571)272-0810. The examiner can normally be reached on Monday: 8:00-2:30; Tuesday-Thursday: 7:30-5:00; Friday: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MY-CHAU T. TRAN/
Primary Examiner, Art Unit 2629

January 5, 2009